

Remarks

Claims 1-11 and 15-25 were pending in the application. Claims 1-6, 9-11, 15-18, and 21-25 were rejected. Claims 7, 8, 19, and 20 were merely objected to and no claims were allowed. By the foregoing amendment, no claims are canceled, no claims are amended, and claims 26 and 27 are added. No new matter is presented.

Allowable Subject Matter

Applicant appreciates the indication of allowable subject matter in claims 7, 8, 19, and 20.

Claims Rejections-35 U.S.C. 103

Claims 1-5 and 10 were rejected under 35 U.S.C 103(a) as being unpatentable over Ono et al. (US6273612) in view of Okamoto et al. (US6089755). Applicant respectfully traverses the rejection.

Ono et al. discloses a crank shaft or crank pin bearing (col. 1, lines 7-8) having a journal with two segments or halves 9 and 10 (col. 5, line 5). A segment has, in one embodiment, a circumferentially varying lubricant concentration of a solid lubricant in a resin (col. 8, line 59-col. 9, line 13). Thus, contrary to the representation in the Office action that the layer varies in "concentration of the solid lubricant along the engagement length...", the concentration is constant along the engagement length but varies circumferentially. Office action, page 2, third full paragraph. No citations have been provided for asserted teachings of Ono et al. contrary to 35 U.S.C. 132(a). There is no citation for the alleged assertion of equivalence between concentration and thickness.

Okamoto et al. discloses use of a longitudinally-varying bearing material thickness to provide an elastic deformation profile that addresses load fluctuations in a crankshaft bearing. Okamoto et al. does not suggest modifications to address operation after a lubricant loss in a geared turbfan transmission. The page 2 assertion to modify Okamoto et al. "... to accommodate the high loads at the ends of the longitudinal direction" is circular logic and without support. There is no indication that one of ordinary skill in the art would have appreciated that Okamoto et al. needed any change to achieve that result, let alone a particular change based upon Ono et al.

There is further no suggestion that the proposed modification would not defeat the load carrying function of Okamoto et al.

Even if combined, there is still no suggestion for the concentration of claim 3. There is no suggestion that the split segments of the two references in the crank field would yield optimization in the claimed range. Regarding claims 4, 5, and 10, there appears to be an *ala carte* mixing of embodiments in citing Ono et al. elements. New claim 26 is claim 5 made dependent upon claim 4 to further preclude such inconsistent interpretation. New claim 27 is supported by claim 11 and similarly precludes such misinterpretation. There has been no proper structural analysis of the means-plus-function claim. The asserted Ono et al. embodiment involves molybdenum disulfide within a resin. This has not been compared to the structure disclosed in the present specification.

Claims 6 and 11 were rejected under 35 U.S.C 103(a) as being unpatentable over Ono et al. in view of Okamoto et al. and further in view of Andler et al. (US6139191) Applicant respectfully traverses the rejection.

Andler et al. was cited for the lead/copper combination. Andler et al. discloses a half bearing with a circumferentially-varying lubricant concentration. Andler et al. et al. does not suggest modifications to address operation after a lubricant loss in a geared turbofan transmission. There is no suggestion, other than hindsight reconstruction, to make changes from Andler et al. to Ono et al. or Okamoto et al. or their combination.

The Office action basically takes the position that it would be obvious to apply any and all prior lubrication systems modified in any and all prior ways to any and all particular situations with a lack of any specific suggestion to do so. This is improper. This further fails to consider the October 26, 2006 declaration of Michael C. McCune which further attests to the nonobviousness of the claimed invention and impropriety of the proposed combinations.

Claims 9, 15-18, and 21-25 were rejected under 35 U.S.C 103(a) as being unpatentable over Ono et al. in view of Okamoto et al. and further in view of McCreary (US4719818). Applicant respectfully traverses the rejection.


McCreary was cited as disclosing "a bushing and journal pin assembly for a geared

turbofan transmission..." Office action, page 3, last paragraph. However, McCreary relates to a turbocharger. However, the admitted prior art cited in the present application may serve the purposes for which McCreary is cited. Nevertheless, there is no suggestion for the proposed combination. It was asserted as obvious "to utilize the bushing assembly of Ono in other known devices including that of a turbofan transmission, because McCreary discloses the use of a bushing obtained by plating" *Id.* This is conclusory, unsupported, and simply wrong. Nothing in any of the asserted combinations is supported by a proper motivation other than hindsight. Supporting of cranks, gears, and turbines all have distinct problems and considerations. For example, there is no suggestion to adopt the split automotive crank bearing construction of Okamoto et al. in the present geared turbofan engine or in the turbocharger of McCreary. Given the differences, something more than a conclusory statement is required.

The Office action appears to take the position that as long as all the individual elements can be found in the prior art, the claim is obvious. This is simply wrong.

Accordingly, Applicant submits that claims 1-11 and 15-27 are in condition for allowance. Please charge any fees or deficiency or credit any overpayment to our Deposit Account of record.

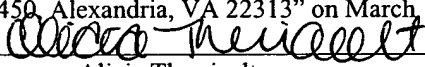
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on March 1, 2007

  
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